SECTION 9C

CONDUCTIVE SPARKPROOF INDUSTRIAL RESINOUS FLOORING

1. APPLICABLE PUBLICATIONS: The National Terrazzo and Mosaic Association, Inc. (NTMA) publication listed below forms a part of this specification to the extent referenced. The publication is referred to in the text by the basic designation only.

Terrazzo Design/Technical Data Book (1981)

2. GENERAL: Conductive sparkproof industrial resinous flooring in the colors indicated shall be applied in the areas shown on the drawings.

3. SUBMITTALS:

3.1 Certificates of Compliance: Certificates of compliance indicating conformance with specified requirements shall be submitted in accordance with the SPECIAL PROVISIONS. Certificates of compliance shall be accompanied by certified test reports from an approved laboratory showing that the resinous floor coating has been tested within the last 12 months and meets the requirements specified herein.

3.2 Descriptive Data: Resin manufacturer's descriptive data, mixing, proportioning and installation instructions shall be submitted for approval. Maintenance literature for terrazzo shall be submitted for information.

3.3 Samples: Two 12- by 12-inch samples of each color of terrazzo shall be submitted for approval.

3.4 Shop Drawings: Shop drawings shall be submitted for approval in accordance with the SPECIAL PROVISIONS. Shop drawings shall indicate the type and layout of divider strips and control joint strips.

4. DELIVERY AND STORAGE: Materials shall be delivered to the project site in manufacturer's original unopened containers. Materials shall be kept dry, protected from weather, and stored under cover so as to prevent freezing.

5. ENVIRONMENTAL REQUIREMENTS: Areas to receive terrazzo shall be maintained at a temperature above 60 degrees F. for 2 days prior to installation and for 7 days following installation.

6. QUALIFICATION OF APPLICATOR: Applicator shall be approved by the resin manufacturer and shall have a minimum of 3 years experience in the application of the materials to be used.

7. MATERIALS:

7.1 Primer: Primer shall be a material recommended by the binder manufacturer which will penetrate the pores of the substrate and bond with the topping to form a permanent monolithic bond between the substrate and the topping.

7.2 Binder: Binder shall be polyacrylate.

7.3 Fillers: Fillers shall be inert mineral or cellulosic material as recommended by the manufacturer and best suited for the resin binder used. Filler in the quantity necessary to impart the required physical characteristics shall be furnished with particle size not greater than 3/16 inch in any dimension and shall contain sufficient fines to provide an even-textured, nonslip type of surface on the finished topping.

7.4 Plastic Strips: Plastic strips shall be of a type and size as recommended by the manufacturer.

8. TEST REQUIREMENTS: The flooring shall meet the requirements specified in paragraph TESTING and to the requirements specified below.

8.1 Polyacrylate Flooring System: Polyacrylate flooring system shall conform to the requirements specified in paragraph 2.01A of Guide Specification for Polyacrylate Modified Terrazzo contained in the referenced NTMA specification. The polyacrylate terrazzo shall conform to the requirements specified in paragraph 2.01G of Guide Specification for Polyacrylate Modified Terrazzo contained in the referenced NTMA specification.

9. PREPARATION OF CONCRETE SUBFLOOR: Installation of the floor topping shall not commence until the concrete substrate is at least 28 days old. The concrete surfaces shall be prepared in accordance with the approved instructions of the manufacturer.

10. MIXING, PROPORTIONING, AND INSTALLATION: Mixing, proportioning, and installation shall be in accordance with the approved instructions of the manufacturer. Strips shall be installed in the locations indicated. The topping shall be applied to give a finish thickness of 3/8 inch. Bases shall be cove type cast-in-place with 1-inch radius cove and shall be 4 inches high.

11. PROTECTION: The flooring shall be covered and protected from damage until completion of the work of all other trades.

12. TESTING:

12.1 Electrical Resistance: Between 30 and 45 days after the flooring installation is completed, the flooring shall be tested for electrical resistance. The flooring and its grounding system shall provide for electrical resistance measured between ground and a 5-pound electrode in direct contact with 5 square inches of floor not to exceed 250,000 ohms. Instruments used in making tests shall be used only when the room is free from exposed explosives. The instrument used shall be portable, self-powered, enclosed unit and shall consist of two dry electrodes. One electrode shall consist of a special metal block (5 pounds in weight) which makes contact with 5 square inches of floor area. The block shall be equipped with a nonmetallic strap to enable pulling the block along the surface of the floor under test. If the flooring is uneven, making it difficult to obtain 5 square inches of contact, a thin coating of "electrode jelly" (brushless shaving soaps) may be applied to the underside

of the block. The other electrode shall consist of a suitable spring test clip for attachment to a permanent ground. The electrodes shall be insulated from each other and should be connected with instruments by test leads of such length that all parts of the floor can be reached. The voltage applied to the instrument should be between 90 and 500 volts. Low voltage instruments may be used, but if the floor shows more than the maximum permitted resistance with instruments of less than 500 volts, a test with a 500-volt instrument should be made before any action is taken to gain greater conductance. If the resistance is then greater than 250,000 ohms, and the floor and electrodes are free from insulating materials, the effectiveness of the floor grounds shall be tested. Tests shall be made by a technician experienced in such work and a copy of the results shall be furnished.

12.2 Spark Resistance: The floor shall be tested for spark resistance by stroking the floor vigorously with a 12-inch hardened steel file in a 3-foot arc. The test shall be performed for each 80 square feet of floor area. Tests shall be made in a darkened space and only when the relative humidity of the atmosphere within the space tested does not exceed 50 percent. The floor shall not produce a spark when tested under these conditions. A copy of the test results shall be furnished.